

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): A gas-barrier laminate comprising a plastic substrate ~~(A)~~, an inorganic thin film ~~(B)~~ formed on at least one surface of the plastic substrate ~~(A)~~, and a coating layer ~~(C)~~ formed by applying a coating material on a surface of the inorganic thin film ~~(B)~~, said coating layer ~~(C)~~ containing a polyester-based resin ~~(e1)~~ having a molecular weight of 3000 to 15000 and a polyurethane-based resin ~~(e2)~~ having a molecular weight of 8000 to 30000 at a weight ratio of 5/95 to 95/5, and said gas-barrier laminate having an oxygen permeability of not more than 25 fmol/m²/s/Pa.

Claim 2 (Currently amended): A gas-barrier laminate according to claim 1, wherein the polyester-based resin ~~(e1)~~ and the polyurethane-based resin ~~(e2)~~ respectively have a glass transition temperature ~~(T_g)~~ of 55 to 100°C and an acid value of 1 to 100 mgKOH/g.

Claim 3 (Currently amended): A gas-barrier laminate according to claim 1 ~~or 2~~, wherein the coating layer ~~(C)~~ contains a silane coupling agent in an amount of 0.1 to 20% by weight.

Claim 4 (Original): A gas-barrier laminate according to claim 3, wherein the silane coupling agent is an epoxy group-containing silane coupling agent and/or an amino group-containing silane coupling agent.

Claim 5 (Currently amended): A gas-barrier laminate according to any one of claims 1 ~~to 4~~, wherein the coating material contains a fatty acid, a fatty ester, a fatty amide or a mixture thereof in an amount of 0.05 to 20 parts by weight based on 100 parts by weight of a sum of the polyester-based resin ~~(e1)~~ and the polyurethane-based resin ~~(e2)~~.

{W:\20916\0205380us0\00855641.DOC 10000209160205380US000855641.DOC }
}


Claim 6 (Currently amended): A gas-barrier laminate according to any one of claims 1-~~to~~5, wherein the coating material contains a polyisocyanate as a curing agent and a content of the polyisocyanate in the coating material is 0.8 to 1.5 times a total hydroxyl equivalent of the polyester-based resin (~~e1~~) and the polyurethane-based resin (~~e2~~).

Claim 7 (Original): A gas-barrier laminate according to claim 6, wherein the polyisocyanate contains at least one compound having three or more active isocyanate group in a molecule thereof.

Claim 8 (Currently amended): A gas-barrier laminate comprising a plastic substrate-~~(A)~~, an inorganic thin film-~~(B)~~ formed on at least one surface of the plastic substrate-~~(A)~~, and a coating layer-~~(C)~~ formed on a surface of the inorganic thin film-~~(B)~~, said coating layer-~~(C)~~ having a hardness of 0.1 to 0.5 GPa as measured at 23°C in atmospheric air by a nano-indentation hardness testing method, and the gas-barrier laminate exhibiting an oxygen permeability of not more than 50 fmol/m²/s/Pa as measured with respect to a gas-barrier film obtained by laminating an unstretched polypropylene film having a thickness of 60 µm on the coating layer-~~(C)~~ of the gas-barrier laminate after subjecting the gas-barrier film to hydrothermal treatment at 120°C for 30 min.

Claim 9 (Currently amended): A gas-barrier laminate comprising a plastic substrate-~~(A)~~, an inorganic thin film-~~(B)~~ formed on at least one surface of the plastic substrate-~~(A)~~, and a coating layer-~~(C)~~ formed on a surface of the inorganic thin film-~~(B)~~, said coating layer-~~(C)~~ having a hardness of 0.03 to 0.5 GPa as measured at 23°C in water by a nano-indentation hardness testing method, and the gas-barrier laminate exhibiting an oxygen permeability of not more than 50 fmol/m²/s/Pa as measured with respect to a gas-barrier film obtained by laminating an unstretched polypropylene film having a thickness of 60 µm on the coating layer-~~(C)~~ of the gas-barrier laminate after subjecting the gas-barrier film to hydrothermal treatment at 120°C for 30 min.

Claim 10 (Currently amended): A gas-barrier laminate comprising a plastic substrate-~~(A)~~, an inorganic thin film-~~(B)~~ formed on at least one surface of the plastic substrate-~~(A)~~, and a coating layer-~~(C)~~ formed on a surface of the inorganic thin film-~~(B)~~, said coating layer-~~(C)~~ having a ratio of

{W:\20916\0205380us0\00855641.DOC  }

number of carbon atoms derived from carboxyl groups to number of carbon atoms constituting the surface of the coating layer (C) of 0.005 to 0.1, and the gas-barrier laminate exhibiting an oxygen permeability of not more than 50 fmol/m²/s/Pa as measured with respect to a gas-barrier film obtained by laminating an unstretched polypropylene film having a thickness of 60 μm on the coating layer (C) of the gas-barrier laminate after subjecting the gas-barrier film to hydrothermal treatment at 120°C for 30 min.

Claim 11 (Currently amended): A gas-barrier laminate according to claim 8-~~or~~9, wherein the ratio of number of carbon atoms derived from carboxyl groups to number of carbon atoms constituting the surface of the coating layer ~~(C)~~ is 0.005 to 0.1.

Claim 12 (Currently amended): A gas-barrier laminate according to ~~any one of claims 8 to 11~~, wherein the coating layer ~~(C)~~ is made of at least one resin selected from the group consisting of a polyester-based resin, an urethane-based resin, an acrylic resin, an alkoxysilyl group-containing resin, an oxazoline group-containing resin and copolymer resins thereof.

Claim 13 (Currently amended): A gas-barrier laminate according to ~~any one of claims 8 to 11~~, wherein a gas-barrier film obtained by forming a printed layer on the coating layer ~~(C)~~ of the gas-barrier laminate and further laminating an unstretched polypropylene film having a thickness of 60 μm on the printed layer exhibits an oxygen permeability of not more than 50 $\text{fmol}/\text{m}^2/\text{s}/\text{Pa}$ after subjecting the gas-barrier film to hydrothermal treatment at 120°C for 30 min.

Claim 14 (Currently amended): A gas-barrier laminate according to ~~any one of claims 1 to 13~~, wherein the plastic substrate (A) comprises a polyester resin, a polyamide resin, a polyolefin resin, an ethylene-vinyl alcohol copolymer resin or a biodegradable resin.

Claim 15 (Currently amended): A gas-barrier laminate according to ~~any one of claims 1 to 14~~, wherein the inorganic thin film ~~(B)~~ is a physically vapor-deposited film or a chemically vapor-deposited film comprising silicon oxide, aluminum oxide, diamond-like carbon or a mixture thereof.

{W:\20916\0205380us0\00855641.DOC | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 }

Claim 16 (Currently amended): A gas-barrier laminate according to ~~any one of claims 1 to 15~~, further comprising an anchor coat layer disposed between the plastic substrate ~~(A)~~ and the inorganic thin film ~~(B)~~.

Claim 17 (Original): A gas-barrier laminate according to claim 16, wherein the anchor coat layer is made of at least one resin selected from the group consisting of a polyester-based resin, an urethane-based resin, an acrylic resin, an alkoxysilyl group-containing resin, an oxazoline group-containing resin and copolymer resins thereof.

Claim 18 (Currently amended): A gas-barrier laminate according to ~~any one of claims 1 to 17~~, further comprising a printed layer formed on a surface of the coating layer ~~(C)~~, and a heat seal layer formed on a surface of the printed layer.

Claim 19 (Original): A gas-barrier laminate according to claim 18, further comprising at least one paper or plastic substrate disposed between the printed layer and the heat seal layer.

Claim 20 (Original): A gas-barrier laminate according to claim 19, wherein the plastic substrate disposed between the printed layer and the heat seal layer comprises a polyester-based resin, a polyamide-based resin, an ethylene-vinyl acetate copolymer resin or a mixture thereof.

Claim 21 (Currently amended): A gas-barrier laminate according to ~~any one of claims 1 to 20~~, wherein the gas-barrier laminate is heat-treated at a temperature of not less than 60°C.

Claim 22 (Currently amended): A gas-barrier laminate according to ~~any one of claims 1 to 21~~, wherein when the gas-barrier laminate is subjected to hydrothermal treatment under pressure at 120°C for 30 min, an oxygen permeability of the gas-barrier laminate after being subjected to the hydrothermal treatment is not more than 25 fmol/m²/s/Pa.

Claim 23 (Currently amended): A gas-barrier laminate according to ~~any one of claims 18 to 22~~, wherein when the gas-barrier laminate is subjected to hydrothermal treatment under pressure at 120°C for 30 min, an adhesion strength between the inorganic thin film ~~(B)~~ and the coating layer ~~(C)~~ is not less than 100 g/15 mm, and an adhesion strength between the coating layer ~~(C)~~ and the printed layer is not less than 100 g/15 mm.

{W:\20916\0205380us0\00855641.DOC {UNCLASSIFIED//NOFORN} }